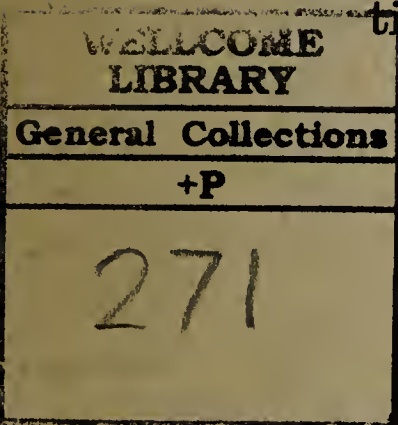


Dr. Barry's Report to the Local Government Board upon
the General Sanitary circumstances and Administration
of the Rawdon Urban Sanitary District.



GEORGE BUCHANAN,
Medical Department,
July 1st, 1890.

The inquiry to which the following report refers was directed to ascertain the general sanitary circumstances and administration of the Urban Sanitary District of Rawdon, with respect to which complaints had from time to time been made to the Board of default by the Sanitary Authority ; and of which the Board could learn nothing from the reports of the Medical Officer of Health.

General Description.—The Urban Sanitary District of Rawdon comprises an area of 1,559 acres. It is roughly triangular in shape, and is bounded on the south by the River Aire, and on the west and east by the Yeadon and Horsforth Urban Sanitary Districts respectively. The district is situated altogether within the watershed of the River Aire, and from its highest point at Billing Hill (700 feet above Ordnance datum) the surface slopes westward to Yeadon, southward to the River Aire (here 200 feet above Ordnance datum), and eastward to the beck dividing Rawdon from Horsforth. There are three aggregations of houses in the district: (a) at Rawdon proper, which is situated nearly in the centre of the district, to the north of the Leeds Road at an elevation of some 400 feet above the river; (b) at Little London, a compact cluster of houses abutting on the Yeadon boundary, directly west of Rawdon but some 100 feet below it; and (c) at New Road Side, Little Moor, and Canada, comprising several straggling rows of houses, situated also near the Yeadon boundary, but a little to the north of Little London and at a slightly higher elevation. The southern portion of the district, known as Crag Wood, between the Leeds Road and the river is thickly wooded and sparsely inhabited:—it contains a number of mansions of Bradford and Leeds manufacturers.

The subsoil consists of sandstone at Little London, and chiefly of clay overlying the sandstone at Rawdon, New Road Side, and Little Moor.

The population in 1871 was 2,796, and in 1881 3,047 living in 660 houses. At the present time the population is estimated at 3,500. The gross rateable value is (1890) 14,271*l.*, and the assessable value 11,768*l.*

There are two woollen mills in the district which employ a number of persons, and several small dairy farms whence milk is sent to Leeds and Bradford.

Before entering on description of the sanitary circumstances of the district, it will be useful to give a brief account of the events which led to, and which followed upon, the formation of the Township of Rawdon into a separate area of Local Government. From 1872 to 1879 the Township of Rawdon was comprised within the Wharfedale Rural Sanitary District. In 1877 the Rural Authority, having received complaints of the existence of nuisances due to the want of sewers in different parts of Rawdon, proposed a scheme for the drainage of the township with the exception of the Crag Wood Estate. Hereupon the inhabitants immediately petitioned the Local Government Board to form the Township of Rawdon into a Local Government District. The Board, upon the receipt of this petition early in 1879 directed local inquiry to be held thereon by their inspector Mr. Morgan. At the inquiry it was stated that

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the Rawdon ratepayers particularly wished (a) to have control of the sewerage,* and (b) to have jurisdiction over the erection of new buildings in their township; and as a result the Board assented to the separation of Rawdon from the district of the Rural Sanitary Authority, and, in an Order dated June 10th, 1879, sanctioned the appointment there of a Local Board.

In 1883, four years after the formation of the Local Board District, a complaint by a resident was lodged with the Board under sect. 299 of the Public Health Act, 1875, that the Local Authority of Rawdon were in default in providing their district with proper sewers. At an inquiry held by Mr. Codrington, under direction by the Board, on the 18th January 1884, this allegation was sustained, and in due course the Sanitary Authority was declared in default. As the Local Authority took no steps to remedy the defects complained of, the Board wrote on September 2nd, 1884, to the Sanitary Authority and informed them that they proposed to direct further local inquiry with a view to dissolving the Local Board. Upon receipt of this letter the Sanitary Authority engaged an engineer to prepare a scheme of sewerage for the district, and on October 31st made application, to the Board for a Provisional Order to enable them to purchase land for the purposes of sewage disposal. After inquiry as to this application, held by Mr. Codrington February 25th, 1885, a Provisional Order was issued to enable the Rawdon Urban Sanitary Authority to put in force the compulsory clauses of the Land Clauses Consolidation Act, and this Order was confirmed by Act of Parliament in July of the same year. In January 1886 the Local Board asked sanction of the Local Government Board to borrow 10,000*l.* for works of sewerage and sewage disposal, and after public inquiry held by Mr. Codrington sanction was given on April 6th, 1886, to the Rawdon Local Board to borrow 8,220*l.* for the construction of the necessary works. In 1887 complaint was made to the Board that nothing had been done to improve the drainage of the district. In answer to a letter which the Board addressed to the Local Authority on this subject, it was stated that nine-tenths of the inhabitants were against the carrying out of the complete scheme for which loan had been sanctioned, but that the Sanitary Authority were then engaged in constructing a sewer which would drain the complainant's property to his satisfaction.

General Sanitary Circumstances.—In describing the general sanitary circumstances of the district I propose to deal first with the results of the control obtained 11 years ago by the inhabitants over the sewerage and over the erection of new buildings in the district: a control sanctioned for the professed purpose of duly regulating these matters.

Sewerage and Drainage.—The sewerage is of a piecemeal and makeshift character. At Rawdon proper the house slops are discharged into roadside channels, and thence are conveyed on to land, where, if it suits the convenience of the farmer, they are utilised; if not, they pass down by means of ditches to the beck which forms the boundary between Horsforth and Rawdon, and which has its outfall into the River Aire. I understand that a field has recently been rented by the Sanitary Authority upon which some of this sewage is to be utilised. At Little Moor and New Road Side, pipe sewers have been laid by the Sanitary Authority which have at present, as matter of fact, an outfall into the sewers of the Yeadon Local Board. As, however, the Rawdon Local Board have failed to come to any agreement with Yeadon, the latter Authority have resolved to sever this sewer connexion, and the consequence will be that the sewage of this portion of the Rawdon district will pass directly into the streams of the Yeadon district. The pipe sewers above referred to are those constructed in 1887 with reference to a particular complaint then before the Local Government Board. They are provided with gratings in the centre of the road for ventilation, but are not furnished with manholes nor with any special means for flushing. The slops from a row of 50 cottages known as "Canada" are discharged into the Slack Beck, which passes through the Yeadon district to the River Aire. At Little London the

* In connexion with this contention it is interesting to note the following minute made at a vestry meeting held on October 10th, 1878, prior to the inquiry; it runs as follows:—"From what has passed it appears that we are powerless in opposing the expensive drainage scheme favoured by the sanitary authority, it was therefore proposed and seconded that a Local Board be formed for managing the affairs of the town of Rawdon without further delay. Carried with only one dissentient."



slops are discharged into the old highway drains, which are stated to be constructed of loose rubble. These drains have an outfall on land comprised within the Esholt Hall Estate, where the sewage is stated to give rise to considerable nuisance. At the time of my inspection the representative of the landowners through whose property this sewage passes made formal complaint to me of nuisance thus arising. The drainage from the Larkfield Mill (situated in the upper part of Rawdon), which consists of suds and dye water, passes by means of an open channel through the Crag Wood Estate to the Aire. This channel receives also the house drainage of some dwellings at Low Green. The drainage of Low Mill, which consists largely of sud water and the refuse from sud tanks, is discharged directly into the River Aire. It is stated that none of the drains above noticed, with the exception of the sewers which have outfall into the Yeadon sewers, receive anything but slop water. The large residential houses at Crag Wood are stated to be furnished in every instance with cesspools.

The house drainage in the case of the older houses is generally most defective. In many instances the house drains are constructed of loose rubble only, and slopstone pipes in this class of property, as for example in Little London, are almost invariably in direct communication with the faulty sewers. In the case of new houses disconnexion of the sink-pipes has apparently been carried out, but some cellars have been directly drained to the sewers. In some houses in Nether Yeadon, Rawdon, drains constructed of rubble pass directly under the houses. No attempt has, I understand, anywhere been made by the Local Board to secure the proper ventilation of house drains.

From the above it will be seen as regards sewerage that, with the exception of the construction of a pipe sewer for the purpose of silencing a particular complainant, no attempt has been made by the Sanitary Authority to provide for the pressing needs of their district.

Dwelling Accommodation.—The dwellings as a rule are built of stone. In Rawdon proper the houses situated on the Rawdon Estate have generally a dilapidated and neglected appearance, and several of them are at the present time unoccupied. A considerable number of the houses are built back-to-back, and even where this is not the case, ventilation of houses is frequently defective. Some of the houses in Rawdon were observed to be damp from want of eave spouts and proper surface drainage, and throughout the district little attention appears to have been paid to the paving of yards. Since the formation of the Local Board several houses have been built at Little London and Little Moor, and at the present time there are in this part of the district other houses in course of construction. These I inspected for the purpose of ascertaining the results of that local supervision so earnestly desired at the time when the Local Board was formed, and in furtherance of which a code of byelaws for the regulations of new streets and buildings was allowed by the Local Government Board on February 5th, 1881.

The nature of the supervision and control exercised by the Sanitary Authority in this matter will be best illustrated by placing in parallel columns (a) the text of some of the more important of the bye-laws, all of which were based on the Board's model, and (b) the state of things actually existing in the case of buildings newly erected or in process of erection.

Provision for securing Dryness of Walls.

(a.) *Byelaws.*

16. Every person who shall erect a new building shall cause every wall of such building to have a proper damp course of sheet lead, asphalte, or slates laid in cement, or of other durable material impervious to moisture, beneath the level of the lowest timbers, and at a height of not less than *six inches* above the surface of the ground adjoining such wall.

(b.) *Actual state of things.*

Damp-proof course absent. It is stated that the provision of damp-proof course in the case of small houses has never been enforced in the district. In certain houses in course of erection the cellars were observed to contain a quantity of water, and the walls to be damp considerably above the ground level.

Provision for preventing Fires.

(a.) *Byelaws.*

25. Every person who shall erect a new building shall cause every party wall of such building to be carried up *nine inches*, at the least, in thickness :

(i.) Above the roof, flat, or gutter of the highest building adjoining thereto to such height as will give, in the case of a building of the warehouse class or of a public building, a distance of at least *three feet*, and in the case of any other building a distance of at least *fifteen inches*, measured at right angles to the slope of the roof, or above the highest part of any flat or gutter, as the case may be :

* * * *

31. A person who shall erect a new building shall not place the end of any bressummer, beam, or joist in any party wall of such building, unless the end of such bressummer, beam, or joist be at least *four and a half inches* distant from the centre line of such party wall.

(b.) *Actual state of things.*

Instead of the party walls being carried through the roof, they are frequently only carried to the level of the ceiling of the topmost story. In no case have the particular provisions of this byelaw been carried out.

In practice the Sanitary Authority, far from requiring a nine inch interval within the party wall between the joists of contiguous houses, has permitted such joists not only to meet but even to pass *through* party walls and to overlap one another. Moreover, the roof timbers of adjoining houses are in all cases continuous.

Provisions with respect to the sufficiency of Space about Buildings to secure a free Circulation of Air.

(a.) *Byelaws.*

53. Every person who shall erect a new domestic building shall provide in the rear of such building an open space exclusively belonging to such building, and of an aggregate extent of not less than *one hundred and fifty square feet*, and free from any erection thereon above the level of the ground, except a watercloset, earthcloset or privy, and an ashpit.

He shall cause such open space to extend, laterally, throughout the entire width of such building, and he shall cause the distance across such open space from every part of such building to the boundary of any lands or premises immediately opposite or adjoining the site of such building, to be not less in any case than *ten feet*.

If the height of such building be *fifteen feet* he shall cause such distance to be *fifteen feet* at the least.

If the height of such building be *twenty-five feet* he shall cause such distance to be *twenty feet* at the least. If the height of such building be *thirty-five feet* or exceed *thirty-five feet* he shall cause such distance to be *twenty-five feet* at the least.

(b.) *Actual state of things.*

Despite the elaborate provisions contained in Byelaw 53 for securing through ventilation to houses, houses are at the present time being erected at Little London, with the approval of the Local Board, *on the back-to-back plan*.

A person who shall make any alteration in or addition to such building shall not, by such alteration or addition, diminish the aggregate extent of open space provided in pursuance of this byelaw in connexion with such building, or in any other respect fail to comply with any provision of this byelaw.

For the purposes of this byelaw the height of such building shall be measured upwards from the level of the ground over which such open space shall extend to the level of half the vertical height of the roof or to the top of the parapet, whichever may be the higher.

54. Every person who shall erect a new domestic building shall construct in the wall of each storey of such building which shall immediately front or abut on such open spaces as, in pursuance of the byelaws in that behalf, shall be provided in connexion with such building, a sufficient number of suitable windows, in such a manner and in such a position that each of such windows shall afford effectual means of ventilation by direct communication with the external air.

As to Byelaw 54, windows have not even been provided in the side walls of the back-to-back houses which are situated at the ends of the rows.

Provisions with respect to the Drainage of Buildings.

(a.) Byelaws.

61. Every person who shall erect a new building shall, in the construction of every drain of such building, other than a drain constructed in pursuance of the byelaw in that behalf for the drainage of the subsoil of the site of such building, use good sound pipes formed of glazed stoneware, or of other equally suitable material.

He shall cause every such drain to be of adequate size, and, if constructed or adapted to be used for conveying sewage, to have an internal diameter not less than *four inches*, and to be laid in a bed of good concrete, with a proper fall, and with watertight, socketed, or other suitable joints.

He shall not construct any such drain so as to pass under any building, except in any case where any other mode of construction may be impracticable, and in that case he shall cause such drain to be so laid in the ground that there shall be a distance equal at the least to the full diameter thereof between the top of such drain at its highest point and the surface of the ground under such building.

(b.) Actual state of things.

Byelaw 61, Clause II. The requirements with respect to the concrete bed for pipes has never been enforced. The Sanitary Authority seemingly consider disturbance of drains, through subsidence of the soil about them as inevitable, and accordingly prefer the joints to be made of clay puddle.

He shall also cause such drain to be laid in a direct line for the whole distance beneath such building, and to be completely embedded in and covered with good and solid concrete, at least *six inches* thick, all round.

He shall likewise cause adequate means of ventilation to be provided in connexion with such drain at each end of such portion thereof as is beneath such building.

He shall cause every inlet to any drain, not being an inlet provided in pursuance of the byelaw in that behalf as an opening for the ventilation of such drain, to be properly trapped.

62. Every person who shall erect a new building shall provide, within the curtilage thereof, in every main drain or other drain of such building which may directly communicate with any sewer or other means of drainage into which such drain may lawfully empty, a suitable trap at a point as distant as may be practicable from such building and as near as may be practicable to the point at which such drain may be connected with such sewer or other means of drainage.

The requirements of the 4th and 5th clauses of this byelaw have not been enforced.

The provision of a suitable trap between the public sewer and private drain of the house has not been enforced.

Provisions with respect to the Construction of Privies.

(a.) Byelaws.

77. Every person who shall construct a privy in connexion with a building, and shall construct such privy for use in combination with a fixed receptacle for filth, shall construct or fix in or in connexion with such privy suitable means or apparatus for the frequent and effectual application of ashes, dust, or dry refuse to any filth which may from time to time be deposited in such receptacle.

He shall construct such receptacle so that the contents thereof may not at any time be exposed to any rainfall or the drainage of any waste water or liquid refuse from any adjoining premises.

He shall construct such receptacle of such material or materials and in such a manner as to prevent any absorption by any part of such receptacle of any filth deposited therein or any escape, by leakage or otherwise, of any part of the contents of such receptacle.

He shall construct such receptacle so that the bottom or floor thereof shall be in every part at least *three inches* above the level of the surface of the ground adjoining such receptacle.

(b.) Actual state of things.

The privies are so constructed as to effectually prevent the application of ashes, &c. to the excreta.

The receptacles, which are not cemented, are constructed with walls of porous brick, and the bottoms of flags.

The receptacles are in all cases constructed so that the bottom is from 6 to 18 inches *below* the level of the surface of the ground.

He shall not in any case construct such receptacle of a capacity exceeding 20 cubic feet.

He shall construct the seat of such privy so that the whole of such seat, or a sufficient part thereof, may be readily removed or adjusted in such a manner as to afford adequate access to such receptacle for the purpose of removing the contents thereof, and of cleansing such receptacle, or shall otherwise provide in or in connexion with such privy adequate means of access to such receptacle for the purpose aforesaid.

As with sewerage so with regulation of new buildings; enough has been said to show how lightly the Local Board regards the responsibilities it has undertaken.

There remain to be described other sanitary circumstances of the district not yet referred to.

Excrement and Refuse Disposal and Removal.—Excrement and ashes (except in the case of better class houses and mansions) are universally disposed of in midden privies, many of which are of large size. All the middens are sunk a foot or more below the level of the ground and are so contrived as to prevent the admixture of ashes with the excrement. A considerable number of the middens are uncovered, and these were noticed in many cases to contain a large quantity of liquid filth. Flagrant instances were observed at Canada, Little Moor, New Road Side, and Little London. These faulty middens are in many cases situated in proximity to dwelling houses. At Nether Yeadon a privy midden, which serves for the use of the inmates of four houses, and which at the time of my inspection was full of filth, abuts directly on the wall of one of the dwellings. The scavenging of middens is left to occupiers, who are dependent upon the farmers; and, as a consequence, accumulations of filth are frequent. Midden contents are removed at intervals varying from two months to a year and upwards. Many of the middens at the time of my inspection were full to overflowing.—It is interesting to note in this connexion that in 1880 the Local Board adopted a code of byelaws (allowed by the Local Government Board, February 5th, 1881) with respect to the removal of house refuse, wherein it was provided that the occupiers of premises should cleanse *once at least in every week* the privies and ashpits belonging to such premises.

The main roads are macadamized with limestone from Thornton-in-Craven, the bye roads with local stone. The main roadways are well kept, and are said to be swept at weekly intervals. None of the “private streets,” I understand, have yet been “dedicated,” and over these the Sanitary Authority exercise no control.

Water Supply.—The water supply is obtained from three sources, namely,—(a) the Yeadon Water Company (the mains of which were first introduced into the district in 1865), whence is derived the supply to Little London, New Road Side, Little Moor, and the southern portion of the district generally; (b) private works constructed some 30 years ago by the late General Rawdon for the supply of houses on his estate, which houses are chiefly situated in Rawdon proper; and (c) a reservoir constructed by Mr. Briggs for the supply of a few houses. The water from each of these sources is stated to be of good quality, and although the Yeadon supply is said to have formerly been insufficient in quantity, arrangements have recently been made by the Company whereby their service is supplemented by an ample constant supply from the works of the Horsforth Local Board. I understand there is at the present time, a considerable extension being made of the Yeadon works.

Slaughter Houses.—There are five slaughter houses in the district, which are stated to be inspected from time to time by the Inspector of Nuisances. They all appeared to be clean and well kept, but from some of them much of the blood and the washings find their way into the faulty sewers of the district.

Some of the receptacles noticed had a *superficial* area alone of over 20 feet; cubic capacity ranged from 40 feet upwards.

In no case have the provisions of this clause been enforced.

The Sanitary Authority possess slaughter-house byelaws based on the Model Series, which were allowed by the Board in 1881, but hitherto none of the slaughter-houses have been registered.

Cowsheds, Dairies, and Milk Shops.—There are a number of cowsheds in the district, but hitherto the Sanitary Authority have taken no steps to secure their registration or inspection. I understand, however, that regulations with respect to these matters have been drawn up and have been submitted to the Local Government Board, though they have not yet come into force. Some cowsheds which I inspected were apparently overcrowded, and were also very dirty.

The Medical Officer of Health (Mr. Cautley Dawson), who is in private practice in the district, receives a salary of 12*l.* per annum, no part of which has hitherto been paid out of the Parliamentary grant. His reports, for the most part couched in general terms only, take an optimistic view of the sanitary state of the district. For example, in his report for the year 1889, he states that “the general condition of the township is satisfactory, the various “ methods of sewage disposal are on the whole efficient.” He has, however, apparently made himself acquainted generally with the district, and it would seem that advice tendered by him has been frequently disregarded by his Authority.

The Inspector of Nuisances (Mr. Joseph Clark) is also the collector of the general district rate, and surveyor. He receives a salary as Inspector of Nuisances of 15*l.* per annum, as surveyor of 35*l.* per annum, and as collector of 52*l.* per annum. He appears well acquainted with the district, but does not seem to have received much support from his Authority in his efforts to secure sanitary improvement.

There are no means in the district for securing isolation of persons suffering from infectious disease, nor for the efficient disinfection of clothing and bedding. There is no system of notification of infectious disease in force in the district.

Public Health in the District.—In the following table will be found the mortality statistics for the Rawdon Urban Sanitary District for the nine years 1881–89, together with the numbers of new cases of sickness from certain specified diseases coming to the knowledge of the Medical Officer of Health during the same period.

TABLE showing the DEATHS in the RAWDON URBAN SANITARY DISTRICT, registered from certain specified Diseases together with NEW CASES of SICKNESS therefrom coming to the Knowledge of the Medical Officer of Health during each of the Nine Years 1881-89.

Year.	Total Deaths from all Causes.	Deaths registered from										New Cases of Sickness coming to the knowledge of the Medical Officer of Health.									
		Small-pox.	Measles.	Scarlatina.	Diphtheria and Croup.	Whooping Cough.	"Fever."	Diarrhoea.	Rheumatic Fever.	Erysipelas.	Puerperal Fever.	Small-pox.	Measles.	Scarlatina.	Diphtheria and Croup.	Whooping Cough.	"Fever."	Diarrhoea.	Rheumatic Fever.	Erysipelas.	Puerperal Fever.
1881 -	23	—	—	—	1	—	1	—	—	1	1	—	—	—	8	3	4	—	6	1	1
1882 -	48	—	10	—	1	3	1	—	—	—	—	—	68	41	7	8	32	—	2	—	—
1883 -	58	—	—	1	—	—	4	—	—	—	1	—	—	13	1	—	7	—	—	—	1
1884 -	43	—	1	—	—	—	1	1	—	—	1	—	14	7	—	—	9	11	4	2	2
1885 -	59	—	—	—	—	1	1	—	—	1	2	—	19	7	2	18	4	56	3	4	2
1886 -	50	—	—	—	—	—	1	1	—	—	1	—	17	—	—	—	6	8	3	2	1
1887 -	38	—	—	1	—	—	1	—	—	—	—	—	5	7	2	2	2	—	—	—	—
1888 -	32	—	—	—	—	—	2	—	—	—	1	—	—	—	—	4	9	5	4	—	2
1889 -	45	—	—	—	2	2	—	—	—	—	—	—	—	—	2	5	4	—	—	—	—
Total 9 years 1881-89.	402	—	11	2	4	6	12	2	—	2	7	—	123	75	22	40	77	80	22	9	9
	12·9	0·0	3·5	0·6	1·3	1·9	3·8	0·6	0·0	0·6	2·2	0·0	39·5	24·1	7·1	12·8	24·7	25·7	7·1	2·9	2·9
	Per 1,000 living.	Mean Annual Mortality rates per 10,000 living.										Mean Annual Sickness rates per 10,000 living.									

From the table it will be seen that the mean mortality from all causes during the nine years 1881-89 has been at the rate of 12·9 per 1,000 living. From infectious diseases the chief mortality has been from measles and "fever" in nearly equal proportions. The actual number of fatal cases of "fever," which was *enteric fever*, has not been large; nevertheless the disease has persisted almost year by year, affording for the period a mean annual death-rate of 3·8 per 10,000 living,—a fever rate considerably above that which obtained during the same period in England and Wales.

From the sickness table it will be observed that measles was epidemic in 1882 and in 1884-86; that scarlatina was epidemic in 1882-83; whooping cough in 1885, and diarrhoea in 1885. It will also be noticed that multiple cases of "fever" were reported as occurring in each year of the period, and that, with the exception of measles and diarrhoea, more cases of "fever" came to the knowledge of the Medical Officer of Health than of any other infectious disease. The number of deaths too from puerperal fever have been considerably more abundant than was to be looked for in a semirural district such as Rawdon.

It will have become evident that 11 years of administration by the Local Board have been of little profit to Rawdon township. Beyond maintaining the efficiency of the main roads, all practically that the Local Board has done has been to construct one sewer for the purpose of silencing a particular complainant, and to draw up a code of byelaws which have not been enforced.

FRED. W. BARRY.

June 1890.
